Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte YING B. YANG, KEIICHI NITO, and AKIO YASUDA

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Appeal No. 1999-1993
Application No. 08/385,702

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ON BRIEF[1]

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Before JERRY SMITH, FLEMING, and DIXON, **Administrative Patent Judges**.

DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2 and 4-13. Claim 3 has been indicated by the examiner to be directed to allowable subject matter.

We REVERSE.

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[1] This appeal has been decided on brief since appellants' representative did not appear at the oral hearing scheduled for May 9, 2001.

BACKGROUND

The appellants' invention relates to a method of driving liquid crystal devices. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A method of driving a liquid crystal display having a liquid crystal material sandwiched between a pair of bases, said method comprising the step of:

applying first select pulses and second select pulses having polarities opposite to each other and having voltages of +/- ($V_{th\ low}$ - $\hat{I}$V) (where $\hat{I}$V > 0) and -/+($V_{th\ high}$ + $\hat{I}$V) (where $\hat{I}$V > 0) , respectively,

where $V_{th\ low}$ is a voltage applied when transmittivity of said liquid crystal material begins to change, and $V_{th\ high}$ is a voltage applied when the transmittivity of said liquid crystal material substantially assumes its maximum value.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Hartmann et al. (Hartmann)	5,047,758	Sep. 10, 1991
Hiroki et al. (Hiroki)	5,200,846	Apr. 06, 1993

Claims 1, 2, and 4-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hartmann in view of Hiroki.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 12, mailed Jan. 20, 1999) for the examiner's reasoning

in support of the rejections, and to the appellants' brief (Paper No. 10, filed Nov. 24, 1998) and reply brief (Paper No. 13, filed Mar. 26, 1999) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The examiner maintains that Hartmann teaches the use of first and second select pulses having polarities opposite each other. (See answer at page 6.) The examiner further maintains that appellants agree that Hartmann teaches this feature of the claimed invention. We agree with the examiner. The examiner maintains that the signals in Hartmann are related to the threshold levels of the display. (See answer at page 6 and Hartmann at columns 3 and 4.) We agree with the examiner.
Furthermore, Hartmann also teaches that the switching of the ferro-electric display elements also depends on amplitude of the signals. (See Hartmann at col 4.) While it is clear to us that there would necessarily be both a high and a low threshold in Hartman, the examiner relies on the teachings of Hiroki to more clearly teach the use of selection signals at both the low and high thresholds when the liquid crystal material

begins to change transmissivity and when it reaches its maximum, respectively. (See Hiroki Fig. 2.) We agree with the examiner that the two threshold voltages were known with respect to the varied transmittivity, but from our review of Hiroki, Hiroki does not teach the use of two different and opposite voltages as the select signals. The examiner relies merely on Fig. 2 to teach the two voltages V_b and V_d. We do not agree with the examiner that the mere existence of the two thresholds teaches or fairly suggests the use of these thresholds as the select voltages. (See brief at page 6.)

Appellants argue that the Hartmann reference "relates to a much different technology and provides no teaching or suggestion whatsoever regarding the claimed invention." (See brief at page 5.) We disagree with appellants. Appellants merely parrot the language and point to the specification at pages 8, 9, and 41 which restate the claimed invention. This argument is not persuasive.

Appellants argue that the signals of Hartmann are bipolar and composed of two sub-signals. (See brief at page 5.) We agree with appellants. Appellants argue that in the claimed invention the select signals are not equal and opposite. (See brief at page 6.) We agree with appellants. From our review of Hartmann, Hartmann teaches that the select voltages are +/- (V_{sel} + Î V) where Î V is V_{dmax} where claim 1 requires that the two select voltage is +/- ($V_{th\ low}$ - Î V) (where Î V > 0) and -/+($V_{th\ high}$ + Î V) (where Î V > 0). Here, one voltage is plus Î V and the other select voltage is minus Î V. Therefore

the teaching of equal and opposite voltage does not teach or suggest the invention as recited in claim 1. Therefore, the examiner has not set forth a **prima facie** case of obviousness, and we cannot sustain the rejection of claim 1 and its dependent claims 2 and 4-13.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 2, and 4-13 under 35 U.S.C. § 103 is reversed.

REVERSED

JERRY SMITH Administrative Patent Judge	)))))) BOARD OF PATENT
MICHAEL R. FLEMING Administrative Patent Judge	) APPEALS) AND) INTERFERENCES
JOSEPH L. DIXON Administrative Patent Judge	))

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SONNENSCHEIN, NATH & ROSENTHAL
P.O. BOX 061080
WACKER DRIVE STATION
CHICAGO , IL 60606-1080